Interview Script - Challenges of Interacting with SoftwareBots on Open Source Software Projects

Starting the interview

- Remembering the terms of the consent form.
- Explaining research objectives.
- Asking permission for recording.

Questions about the participant's experience

- How experienced are you with software development?
- How experienced are you with open-source software development?
- What is your experience with GitHub bots (as maintainer, contributor, or bot developer)?
- For how long have you been interacting with software bots on GitHub?

  (OR - for bot developers) For how long did you maintain this bot?
- Do you have experience using bots in projects outside GitHub? (Yes/No)
    a. Which type of bot?
    b. How many years of experience do you have?

Questions about software bots on pull requests

- *(For bot developers) How would you describe the trajectory of the design of these bots?*
    a. *Which type of challenges have you experienced?*
- Do you have experience in projects that use bots to support pull requests? (Yes/No)
    a. How many projects? Which projects?
    b. How many bots? Which bots?
- Have these bots been developed specifically for those projects? (Yes/No)
    a. *(For bot developers) Why did you build this bot?*
    b. (If Yes) Are they available for other projects/communities?
- How would you describe the role of these bots (the tasks they have to fulfill, purpose)?
- How do these bots interact on pull requests (commenting, labeling, assigning reviewers, opening/merging PRs)?
- Is it common to have more than one bot interacting in a pull request? (Yes/No)
    a. (If yes) Can you tell me an example of multiple bots interacting?
- What kind of support do you expect from a bot adopted to work on pull requests?
    a. Does it depend on the role of the bot?
- Do you think that the bot comments on pull requests are meaningful in providing feedback? (Yes/No)
    a. (In both cases) Why?

Questions about human-bot interaction problems

- What is your perception about the ecosystem of bots working on GitHub platform?
- In your opinion, what are the main problems that the use of bots on pull requests introduces?
- What is the frequency of these problems?
- What is the relevance of these problems?
- Who do these problems mainly impact (contributors, maintainers, newcomers, ...)?
- Are these problems caused by a specific type of bot? (Yes/No)
    a. (If Yes) Which one?
    b. (In both cases) Why?
- Do bots introduce any technical issues to the project (configuration, …)?
- Do bots introduce any social or ethical issues to the project (communication, …)?
- Have you ever heard developers complaining about bots (about the interaction of these bots)?
- Do you remember any case of a bot bothering you? (Yes/No)
    a. (If Yes) How did you handle it?
    b. (If Yes) Did you or someone else solve this problem?
- Do you think these problems can lead projects to stop using a bot? (Yes/No)
    a. (In both cases) Why?
    b. (If Yes) Do you remember any?

Questions about solutions

- How would you change the bots to avoid such problems?
- How do you see the future of software bots for GitHub pull-requests?